

Appendix B (Acronyms, List of Deliverables and Schedule)

Acronyms

AOC	Administrative Order on Consent
ARARs	Applicable or Relevant and Appropriate Requirements
BERA	Baseline Ecological Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLP	Contract Laboratory Program
CSM	Conceptual Site Model
DMP	Data Management Plan
DQO	Data Quality Objectives
EPA	U.S. Environmental Protection Agency
ERT	Environmental Response Team
ESD	Environmental Services Division
FS	Feasibility Study
FSP	Field Sampling Plan
HSP	Health and Safety Plan
HHRA	Human Health Risk Assessment
NAPLs	Non aqueous phase liquid
NCP	National Contingency Plan
ODEQ	Oklahoma Department of Environmental Quality
PRP	Potentially Responsible Party
PSCSR	Preliminary Site Characterization Summary Report
QAPP	Quality Assurance Project Plan

QA/QC	
RI	Remedial Investigation
RSCC	Regional Sample Management Coordinator
SAP	Sample and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SLERA	Screening Level Ecological Risk Assessment
SMO	Sample Management Office
SOPs	Standard Operating Procedures
SOW	Statement of Work
SMP	Sample Management Plan
SSP	Site Security Plan
RI	Remedial Investigation
RI/FS	Remedial Study and Feasibility Study
ROD	Record of Decision
TSWP	Treatability Study Work Plan
TSR	Treatability Study Report

List of Deliverables and Schedule

DUE WITHIN 30 DAYS

Scoping meeting to occur within thirty (30) days after the effective date of the AOC.

Cost estimate assume for scoping and work plan:

Principal 24 hours @ \$250 = 6,000

Project Manager 80 @ 150 = 12,000

Engineer 80 @ 150 = 12,000

Jr Engineer 80 @ 100 = 8,000

Scientist/Risk A 60 @ 150 = 9,000

Clerical 60 @ 75 = 4,500

Travel 2 persons @ \$ 600 = 1,200

Total = \$ 52,700

LOE 324 hrs + 75 clerical

DUE WITHIN 60 DAYS

Draft RI/FS Work Plan due within sixty (60) days after the scoping meeting. Amended Draft Work Plan within thirty (30) days after the receipt of the EPA's comments. Final Work Plan due within fourteen (14) days of the receipt of the EPA's approval of the Amended Draft RI/FS Work Plan.

Draft Conceptual Site Model (CSM) to be included with the Draft RI/FS Work Plan and subsequent revisions (Amended and Final Work Plan).

Principal 2 hours @ \$250 = 500

Project Manager 12 @ 150 = 1800

Engineer 40 @ 150 = 6,000

Jr Engineer 20 @ 100 = 2,000

Scientist/Risk A 40 @ 150 = 6,000

Clerical 30 @ 75 = 2250

Travel 1 @ \$600 = 600

Total = \$ 19,150

LOE 114 hr + 75 clerical

HSP due within sixty (60) days after the effective date.

Principal 2 hours @ \$250 = 500

Project Manager 8 @ 150 = 1,200

Engineer 20 @ 150 = 3,000

Jr Engineer 20 @ 100 = 2,000

Scientist/Risk A 6 @ 150 = 900

Clerical 25 @ 75 = 1875

Total = \$ 20,275

LOE 56 hrs + 75 clerical

Draft FSP due within sixty (60) days after the scoping meeting. Amended Draft FSP within thirty (30) days after the receipt of the EPA's comments. Final due within fourteen (14) days of the receipt of the EPA's approval of the Amended Draft FSP. Please note, Data Management Plan (DMP), Sample and Analysis Plan (SAP), Site Security Plan (SSP), Sample

Management Plan(SMP) and other individual plans can be included and submitted within the FSP.

Principal 4 hours @ \$250 = 1000
Project Manager 16 @ 150 = 2,400
Engineer 40 @ 150 = 6,000
Jr Engineer 20 @ 100 = 2,000
Scientist/Risk A 12 @ 150 = 1,800
Clerical 40 @ 75 = 3000
Total = \$ 16,200
LOE 92 hrs + 75 clerical

QAPP due within sixty (60) days after the scoping meeting. Amended QAPP within thirty (30) days after the receipt of the EPA's comments. Final due within fourteen (14) days of the receipt of the EPA's approval of the Amended QAPP. Please note; the QAPP is a standalone document that cannot be combined with other documents. An approved QAPP is required before collecting any environmental data.

Principal 2 hours @ \$250 = 500
Project Manager 8 @ 150 = 1200
Engineer 30 @ 150 = 4,500
Jr Engineer 30 @ 100 = 3,000
Scientist/Risk A 8 @ 150 = 1200
Clerical 30 @ 75 = 2250
Total = \$ 12,650
LOE 78 hrs + 30 clerical

DUE AS SPECIFIED IN THE FINAL RI/FS WORK PLAN AND AFTER FIELD SAMPLING AND ANALYSIS

Draft PSCSR due as specified in the Final RI/FS Work Plan. Amended Draft due within thirty (30) days of the receipt of EPA's comments. Final due within fifteen (15) days of the receipt of the EPA's approval of the Amended Draft PSCSR. (Preliminary Site Characterization Report)

Principal 4 hours @ \$250 = 1000
Project Manager 40 @ 150 = 6000
Engineer 120 @ 150 = 18000
Jr Engineer 80 @ 100 = 8000
Scientist/Risk A 30 @ 150 = 4500

Clerical 60 @ 75 = 4500
Total = \$ 42,000
LOE 274 hrs + 75 clerical

XXXXXXXXXXXXXXXXXXXX FIELD ACTIVITIES XXXXXXXXXXXXXXXX

125 acres, assume 4 composite samples per acre = 500 samples @ \$1000 = \$500,000
Installation of 20 wells @ \$15,000 plus sampling = \$300,000
25 sediment samples @ 1000 = 25,000
Air monitoring and sampling \$50,000
Drinking water well sampling \$50,000
Soil borings Lump sum \$75,000

Field activities 4 weeks
Project Manager 160 hrs @ 150 = 24,000
Engineer (2 engineers 4 weeks) 320 hrs @ 150 = 48,000
Jr Engineers/Scientist (4 jr engineers 4 weeks) 640 hrs @ 100 = 64,000
Scientist/other (2 scientist 4 weeks) 320 hrs @ 80 = 25,600
Subtotal – \$ 1,211,600
LOE 1714 hrs

Safety equipment, rental car, consumables 10% = \$ 110,000

Hotel/perdiem
Project Manager 25 days @ 200 = 5,000
Engineer 50 days @ 200 = 10,000
Jr Engineers/Scientist 100 days @ 200 = 20,000
Scientist/other 50 days @ 200 = 10,000
Travel by air 8 @ \$500 = \$4000
Subtotal = \$ 49,000

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DUE AS SPECIFIED IN THE FINAL RI/FS WORK PLAN

Draft due as specified in the Final RI/FS Work Plan. Amended Draft due within forty-five (45) days of the receipt of EPA's comments. Final due within thirty (30) days of the receipt of the EPA's approval of the Amended Draft RI/FS HHRA.

Principal 4 hours @ \$250 = 1000
Project Manager 40 @ 150 = 6000

Engineer 120 @ 150 = 18000
Jr Engineer 80 @ 100 = 8000
Scientist/Risk A 30 @ 150 =4500
Clerical 60 @ 75 = 4500
Total = \$ 42,000
LOE 274 hrs +75 clerical

Draft SLERA due as specified in the Final RI/FS Work Plan. Amended Draft due within forty-five (45) days of the receipt of EPA comments. Final due within thirty (30) days of the receipt of the EPA's approval of the Amended Draft RI/FS SLERA.

Principal 4 hours @ \$250 = 1000
Project Manager 40 @ 150 = 6000
Engineer 120 @ 150 = 18000
Jr Engineer 80 @ 100 = 8000
Scientist/Risk A 30 @ 150 =4500
Clerical 60 @ 75 = 4500
Total = \$ 42,000
LOE 274 hrs +75 clerical

Draft BERA due as specified in the Final RI/FS Work Plan. Amended Draft due within forty-five (45) days of the receipt of EPA comments. Final due within thirty (30) days of the receipt of the EPA's approval of the Amended Draft RI/FS BERA.

Principal 4 hours @ \$250 = 1000
Project Manager 40 @ 150 = 6000
Engineer 120 @ 150 = 18000
Jr Engineer 80 @ 100 = 8000
Scientist/Risk A 30 @ 150 =4500
Clerical 60 @ 75 = 4500
Total = \$ 42,000
LOE 274 hrs +75 clerical

DUE WITHIN 60 DAYS AFTER NOTIFICATION

Draft due within sixty (60) days of the receipt of EPA's notice that treatability studies are required. Amended Draft due within thirty (30) days of the receipt of the EPA's comments. Final due within fourteen (14) days of the receipt of the EPA's approval of the Amended Draft TSWP and SAP.

Assume study to support TI waiver of DNAPL and or containment of DNAPL

Lump sum Total \$ 75,000

Draft due as specified in the Final Treatability Study Work Plan. Amended Draft due within forty-five (45) days of the receipt of the EPA's comments. Final due within thirty (30) days of the receipt of the EPA's approval of the Amended Draft TSR.

DUE AS SPECIFIED IN THE FINAL RI/FS WORK PLAN

Draft due as specified in the Final RI/FS Work Plan. Amended Draft due within forty-five (45) days of the receipt of the EPA's comments. Final due within thirty (30) days of the receipt of the EPA's approval of the Amended Draft RI Report.

Principal 4 hours @ \$250 = 1000

Project Manager 80 @ 150 = 12000

Engineer 160 @ 150 = 24000

Jr Engineer 120 @ 100 = 12000

Scientist/Risk A 30 @ 150 = 4500

Clerical 60 @ 75 = 4500

Total = \$ 58,000

LOE 394 hrs + 60 clerical

Draft Alternatives Screening Technical Memorandum due as specified in the Final RI/FS Work Plan. Amended Draft due within thirty (30) days of the receipt of the EPA's comments. Final due within fourteen (14) days of the receipt of the EPA's approval of the Amended Draft.

Principal 4 hours @ \$250 = 1000

Project Manager 30 @ 150 = 4500

Engineer 60 @ 150 = 9000

Jr Engineer 40 @ 100 = 4000

Scientist/Risk A 10 @ 150 = 1500

Clerical 30 @ 75 = 2250

Total = \$ 22,250

LOE 144 hrs + 30 clerical

Draft Alternative Evaluation Technical Memorandum due as specified in the Final RI/FS Work Plan. Amended Draft due within thirty (30) days of the receipt of the EPA's comments. Final due within fourteen (14) days of the receipt of the EPA's approval of the Amended Draft ARAR Report.

Principal 4 hours @ \$250 = 1000

Project Manager 30 @ 150 = 4500

Engineer 60 @ 150 = 9000
Jr Engineer 40 @ 100 = 4000
Scientist/Risk A 10 @ 150 = 1500
Clerical 30 @ 75 = 2250
Total = \$ 22,250
LOE 144 hrs + 30 clerical

Draft FS Report due as specified in the Final RI/FS Work Plan. Amended Draft FS Report due within thirty (30) days of the receipt of the EPA's comments. Final Amended FS Report due within fourteen (14) days of the receipt of the EPA's comments.

Principal 4 hours @ \$250 = 1000
Project Manager 80 @ 150 = 12000
Engineer 160 @ 150 = 24000
Jr Engineer 120 @ 100 = 12000
Scientist/Risk A 30 @ 150 = 4500
Clerical 60 @ 75 = 4500
Total = \$ 58,000
LOE 394 hrs + 75 clerical

DUE MONTHLY AND WEEKLY

Submit monthly report showing work completed, ongoing work, anticipated work/deliverables for the next two months and problems/delays. Initially due as specified in the RI/FS Work Plan. Thereafter, due by the tenth day of the following month.

Assume 3 years for 36 contractor monthly reports each:

Project Manager 4 @ 150 = 600
Accounting 16 @ 75 = 1200
Management 8 @ 100 = 800
Clerical 12 @ 75 = 900
Total = 3,500 x 36 = \$ 126,000
LOE 1008 hrs

Submit brief weekly status report by email to EPA and the ODEQ, highlighting upcoming deliverables, current submitted deliverables pending for review and comments. Due at the beginning of each week.

Project Manager 3 @ 150 = 450
Total = 450 x 150 = \$ 67,500
LOE 450 hrs

TOTAL \$ 1,978,575

LOE 6,008 hrs